



SOLVAY MINERALS

July 9, 1998

Lee Gribovicz
WDEQ-Air Quality Division
250 Lincoln
Lander, WY 82520-2848

Dear Lee:

RE: Reply to FY '98 Annual Inspection Report

Following are the "AIR QUALITY CONCERNS" detailed in your 1998 Annual Inspection Report with responses to them.

- 1a. MD-282 Operating Permit (MBS Dryer NO_x Rate): As described in this report, permit MD-282 allowed Solvay to diversify their sodium sulfite plant by adding equipment to produce a new "sodium Metabisulfite" (MBS) product (Na₂S₂O₅). This project involved construction of new digester, absorber and crystallizer equipment, with an MBS soda ash feed bin vent baghouse (AQD #72) and MBS Dryer scrubber (AQD #73) as the emission points. The project also involved construction of a new product bagging facility. Other miscellaneous plant upgrades were also addressed in this permit, including the installation of a new 200 MM Btu/hr natural gas "low NO_x" burner on "C" Calciner (AQD #48), and the installation of two 6 MM Btu/hr natural gas-fired "pre-heaters" in the inlet ducts of the "A" & "B" Line steam tube dryers. Finally, MD-282 incorporated emission modifications made to four housekeeping dust control systems (AQD #64-Sulfite Blending Baghouse #2; AQD #65-Sulfing Blending Baghouse #1, AQD #66-Carbon/Perlite Additive Scrubber & AQD #67-Boiler Bottom Ash Baghouse) under a March '96 waiver from the Division.

By April 29, 1998 letter, Solvay requested that the projects completed under the MD-282, be incorporated into the plant Section 30 operating permit. However, there remains an issue which must be resolved before issuance of an operating permit. In your 11/3/97 response to the FY '97 Annual Inspection, Solvay informed the Division that the "as constructed" MBS Dryer had a firing capacity of 2.5 MM Btu/hr, which is larger than the 1.5 MM Btu/hr design capacity considered in the permit. As a result, you requested permission to increase the allowable NO_x emission rate from 0.15 pph to 0.25 pph, based on the manufacturer's 0.1 lb/MM Btu NO_x emission guarantee.

Division Managers are currently reviewing a waiver for this revision, and Solvay should expect to receive confirmation of their decision on this matter shortly. Once this waiver is officially granted, you will be required to update your current Title V Operating Permit Application to reflect this revised equipment capacity. Please provide this office with a copy of your written modification, when you revise your Operating Permit application.

On May 28, 1998, Solvay Minerals received a Waiver for AQD #73 Metabisulfite Dryer to increase the NO_x allowable to 0.25 PPH. A revision to the Section 30 Permit Application to reflect this change is being sent to you and Mike Stoll of the Operating Permit Program under separate cover, concurrent with this letter.

- 1b. MD-282 Operating Permit (AQD #15 Preheater NO_x Rate): As described in this report, installation of the air preheaters for AQD #15 stack "A" and "B" line steam tube dryers was completed in January '98. In your 11/3/97 response to the FY '97 Annual Inspection, Solvay informed the Division that the "as constructed" preheater burners actually had a firing capacity of 9.0 MM Btu/hr each, however, which is larger than the 6.0 MM Btu/hr design capacity considered in the permit. As a result, the allowable NO_x emission rate will increase from 1.20 pph to 1.80 pph, based in the manufacturer's 0.1 lb/MM Btu NO_x emission guarantee (Solvay's letter incorrectly stated that an emission factor of 0.15 lb/MM Btu was used in MD-282).

Division Managers are currently reviewing a waiver for this revision, and Solvay should expect to receive confirmation of their decision on this matter shortly. Once this waiver is officially granted, you will be required to update your current Title V Operating Permit Application to reflect this revised equipment capacity. Please provide this office with a copy of your written modification, when you revise your Operating Permit application.

On May 28, 1998, Solvay Minerals received a Waiver for AQD #15 Dryer Stack Preheater to increase the NO_x allowable to 1.8 PPH. A revision to the Section 30 Permit Application to reflect this change is being sent to you and Mike Stoll of the Operating Permit Program under separate cover, concurrent with this letter.

- 1c. MD-282 Operating Permit (NO_x Testing): As described in this report, the FY '97 Annual Inspection raised the issue that NO_x testing of AQD #15 and AQD #73 had not been conducted. Last year's inspection transmittal letter stated that NO_x testing would not be required if Solvay could affirm that the burners were operating within the BACT limit of 0.1 lb/MM Btu for

NO_x. Solvay's 11/3/97 response stated that these burners would be operated "within the manufacturer's operational design specifications so as not to exceed 0.1 lb NO_x/MM Btu...". The inspector's review of this matter concluded that because these are different burners than originally considered, the Division should see the details of the guarantee. Therefore in your response to this inspection transmittal, please provide a copy of the manufacturer's written specifications for the burner sizes and guaranteed emission factors certifying 0.1 lb/MM Btu NO_x performance.

Enclosed is a copy of the Final Quote and Purchase Order for the burners associated with AQD #15. Also enclosed is the Final Billing for the burner associated with AQD #73, stating that a 2.5 MM Btu/hr burner was purchased. The written guarantee of 0.1 lb NO_x/MM Btu is forthcoming under separate cover.

2. AQD #33 Sulfur Burner Testing: As described in this report, the Division waived permitting requirements for the AQD #33 sulfur burner modification which entailed lengthening the ductwork of the combustion chamber by four feet (5/2/97). The result of this modification was to be increased residence time of the sulfur in the combustion chamber prior to initial quenching, thereby allowing more sulfur to be burned and converted to SO₂ (design sulfur feed increased from 45 TPD to 55 TPD). The modification was completed in December '97, but a total of eight feet of ductwork was added, raising the sulfur burning capacity to 60 TPD. Solvay conducted NO_x and SO₂ testing on this stack March 31st, and the test report was submitted after the completion of this report, under May 15, 1998 cover.

The report shows that testing was completed at a sulfur burn rate of 62 lb/minute (44.6 TPD), or 74% of the rated capacity. Emissions showed that SO₂ emissions averaged less than 0.05 pph, or less than 13% of the 0.40 pph allowable on this stack. NO_x emissions also averaged 0.05 pph, about 3% of the 1.50 pph allowable for this stack. Based on these results, the Division is satisfied that the AQD #33 sulfur burner stack is operating in compliance with terms of the permit waiver allowables, most recently codified under CT-1347. Please note that if future operations significantly exceed the 62 lb/min sulfur burn rate, additional testing could be required to verify emissions at these higher process rates.

If in the future, the AQD #33 sulfur burn rate significantly exceeds 62 lb/min, The Division will be notified to determine if additional testing is required.

3. **NSR-K76 VOC Permit Application:** As described in this report, in February of 1996, Solvay submitted a Section 21 permit application to address for plant-wide VOC emissions. An October '96 draft analysis of this project is currently being reviewed by the Air Quality Permitting Manager, Bernie Dailey, and Cheyenne Air Quality Management will determine whether this matter will be eventually pursued.

The purpose of the NSR-K76 Permit Application was to amend MD-132 to address VOC emissions. Although this was accomplished, VOC emissions have been more thoroughly quantified and speciated in a more recent permit, CT-1347. Solvay Minerals, Inc. requests that NSR-K76 be abandoned.

4. **CT-1347 Permit Status:** As described in this report, permit CT-1347 allowed Solvay to construct a fourth soda ash process line at 1.2 MM TPY capacity, bringing the total plant rating to 3.6 MM TPY. The latest construction schedule was submitted March 19, 1998, showing three construction phases. Phase I (September, 2000 start up) consists of most of the new equipment, including the new calciner, dryer, and other associated equipment. Phase II (January, 2001 start up) includes the additional covered trona ore storage facility and additional crushing and screening units. Phase III (January, 2003 start up) includes additional evaporative capacity and the new package natural gas boiler. The existing calciners are to be modified with bucket elevators at the outlet, replacing existing drag conveyers and increasing design throughput to 200 TPH each. CA-1 and CA-3 have already been modified, with CA-2 scheduled for the first quarter of 1999.

Currently the Division understands that major equipment for the fourth process line (calciner & dryer kiln shells) has been delivered to the site. In your response to this inspection transmittal, please provide an updated status report on the project, confirming whether the March 19, 1998 construction schedule is still accurate.

The construction schedule noted in the March 19, 1998 correspondence to The Division is still accurate, with the exception of the modification to Calciner #2 (AQD #17). This calciner is scheduled to be modified during the first quarter of 2000.

5. **AQD #48 Calciner Testing:** As described in this report, installation of bucket elevators at the outlet of the AQD #48 calciner and on the AQD #17 "A" calciner was completed in February '98 under CT-1347. Initial testing of the #48 calciner was performed March 31st, but preliminary results showed it was not meeting particulate or NO_x emission limits.

Retesting of this calciner took place in April '98, along with initial testing of the #17 calciner. I note that your May 26, 1997 letter conveys these test reports to the division. Preliminary indications are that particulate and NO_x are back in compliance for AQD #48 at 197 TPH ore rate. In addition, all parameters show compliance on the AQD #17 stack, however only CA-1 ore rate was near the final design conditions at 191 TPH, while CA-2, which does not yet have its bucket elevator replacement, operated at 145 TPH ore rate. Thus, the AQD #17 stack must be retested, after its modification is complete next year. The division will review these reports for confirmation of these results.

As noted above, the modification to CA-2 has been rescheduled for the first quarter of 2000. Solvay Minerals, Inc. understands that the AQD #17 stack must be tested following the modification.

6. Section 30 Operating Permit: As described in this report, Solvay's Section 30 Operating Permit Application was determined to be administratively complete in 1996, but the Division's work backlog has delayed issuance of that permit. Revisions to the application were submitted 11/5/97 to include the D Train expansion, and to reduce some allowables on existing sources, while Solvay's 4/17/98 submittal presented more comprehensive revisions to include changes since the original November '95 permit application. As noted earlier in this letter, additional revisions are required for AQD #15 and AQD #73 NO_x emissions. As a result of these modifications, the issuance date for the Solvay Section 30 permit is currently undetermined.

As previously noted, Section 30 revisions to AQD #15 and AQD #73 are being forwarded to you and Mike Stoll of the Operating Permit Program under separate cover, concurrent with this letter.

7. Emission Inventory Validity: As described in this report, during this inspection, the inspector recorded the boiler electrostatic precipitator (ESP) control parameters and compared against the latest test data from the 8/12/97 RATA report. From this RATA report, the steam loads for both boilers were lower during the March '97 testing (#18 → 256K pph & #19 → 250K pph) than those observed during this inspection (#18 → 262K pph & #19 → 257K pph), and the RATA loads are only 83-85% of the design 300,000 pph capacity of these boilers. Thus the representativeness of the March '97 RATA testing for long term operation can be questioned.

Also noted by this inspection was the fact that Solvay used the particulate emission rates from the 1997 RATA, as the actual rates in their 1997 Emission Inventory, even though Solvay did not submit the results of

these test (RATA report only provided SO₂/NO_x information – see discussion in Annual Emission section of this report). Also, Solvay used particulate emission rates from April '97 testing on AQD #50 and #53 product housekeeping baghouses, even though no reports were submitted on those tests.

A couple of points must be made here. First is the fact that a RATA is a quality assurance check on a CEM system, and is not necessarily a compliance check on an emission source. The intent of the RATA is to compare stack test values against the instrument reading, and not against the emission limits. That is not to say that if done properly, RATA stack testing cannot be used for the dual purpose of compliance testing. If the company has clearly communicated their desire to use RATA testing for compliance purposes, has prepared a protocol which adequately indicates how process and control equipment operating conditions are to be documented, has given the Division adequate opportunity to observe the testing, and pays careful attention to assure that representative high load conditions are tested, then the report can be used for compliance/emission inventory purposes. However, unless these procedures are followed, the Division does not automatically consider results outside the instrument quality assurance realm.

The second point is that the Division does not accept Emission Inventory assertions that are not backed up by full Division participation in the capture and reporting of that data. "Engineering" testing for evaluation of some parameter for internal company review is perfectly acceptable for that purpose, but similar to the above discussion, that data cannot then automatically be converted to information the Division will rely on for compliance or emission inventory determinations. Once again, the validity of a test depends as much on advance communication, protocol, operating rates, and participation of the Division, as on the technical aspects of collecting, analyzing and reporting a pollutant.

In this case, the Division did not accept the Spring '97 particulate testing of the boilers and housekeeping baghouses, when confirming Solvay 1997 emissions, as there was no opportunity to verify procedures and conditions. If Solvay wishes to include such testing in future emission inventories, please pay attention to the procedural requirements for obtaining Division concurrence with the test results.

As noted in your inspection report, the RATA is a quality assurance check on the CEM system. Per 40 CFR Part 60, Appendix B, Specification 2, 5.3, "conduct the RA test ... while the affected facility is operating at more than 50 percent or normal load". Running the RATA at 85% and 83% of design

for Boilers #1 (AQD #18) and #2 (AQD #19) respectively, is acceptable. The "RATA" results were not used as a compliance check for NO_x or SO₂, however, a particulate test was conducted concurrent with the RATA. The primary reason for the particulate test was to confirm that the actual emissions were below the then existing permitted emission rate of 17 PPH, so a new permit limit, closer to actual could be set in Permit CT-1347. Results of the testing utilizing Methods 1 through 5 without deviation, were 2.3 and 1.6 PPH for Boiler #1 (AQD #18) and Boiler #2 (AQD #19), respectively. (Although Method 202 was also conducted, per 40 CFR Part 60.46, Method 5 is to be utilized to determine compliance for Subpart D Boilers.) The test results are detailed in Report CAE Project No: 7920, which is forthcoming under separate cover. A summary of the results follow, with a comparison to the CT-1347 Permit Allowable Rate of 5.0 PPH:

Unit AQD #	Load (%)	Particulate (PPH)	Percentage of Permit Allowable
18	85	2.3	46
19	83	1.6	32

Stack test results of AQD #s 2a, 50, and 53 utilizing Methods 1 through 5 and 202 without deviation, are also forthcoming under separate cover.

If the future, Solvay Minerals will follow the proper protocol to allow participation of The Division when stack testing is being conducted to confirm emission rates. For the current tests in question, Solvay Minerals requests that The Division review the reports and accept them for compliance and future emissions inventory purposes.

8. 1997 RATA Review: As described in this report, the 1997 Relative Accuracy Test Audits on the two coal-fired boilers (#18 and #19) were conducted in March, 1997, with the report submitted August 12, 1997. The Division's CEM Specialists have been contacted and they will provide you with their conclusions at the completion of their review.

As of June 1, 1998, The Division has completed the review of the 1997 RATA and has reported that the CEMs demonstrated compliance with the quality assurance requirements.

9. Mine Vent VOC Emissions: As described in this report, Solvay's 1997 VOC emissions inventory decreased dramatically from 1996 (nearly 3600 tons), primarily due to April '97 testing on the mine vent which showed much lower emission rates. Solvay had erroneously included the methane/ethane component in previous emissions calculations, but in the 11/3/97 response to the FY '97 Annual Inspection, tests indicated mine

vent VOC emissions were actually 32.7 pph of C3+ compounds. Based on this information, request was made to credit their 1996 inventory fees.

The Division's 1/9/98 review of the testing found several deficiencies in the test methods, however, and rejected the test results. Thus mine vent retesting was required, and that work was completed on 1/20/98 per an approved 1/14/98 protocol (2/2/98 stack test observation memorandum). If you have not already done so by the time you respond to this inspection transmittal letter, please provide the test results from that January '98 testing with that response.

Regarding fee adjustment, review shows that the results of the 11/96 tests come out to 115 pph VOC emissions, without methane and ethane. This is the most recent emission result currently available, and therefore should have been used for both the '96 and '97 inventories. This emission rate translates to annual mine vent emissions of 504 tons of VOC for each of the last two years. A recommendation will be sent to Cheyenne Division Management to credit the 1996 VOC emissions fee total to reflect this change.

The 1997 Emissions Fees reflected a credit for the 1996 VOC Emissions Fees based on the results of the November 1996 VOC testing. The January 1998 VOC testing conducted on the Mine Vent is forthcoming under separate cover.

10. Alkaten Transloading: As described in this report, the FY '97 Annual Inspection Report documented the renovation of the Alkaten transloading baghouse system (AQD #45). Solvay conducted a trial of the rebuilt system in July '97, and according to your 11/3/97 inspection response, T-200 product was transloaded with no visual emissions. Copies of photos taken looked at this transloader baghouse configuration during a March 31st inspection (4/6/98 memorandum). Based on these photos, and on the March inspection observations, the Division accepts that this source is now in compliance with opacity and emission regulations.

No Response.

Lee Gribovicz
Reply to FY '98 Inspection Report
July 9, 1998
Page #9

If you have any questions concerning these responses, feel free to contact me at
(307) 872-6571.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Dolly A. Potter". The signature is fluid and cursive, with the first name "Dolly" being the most prominent.

Dolly A. Potter
Environmental Engineer

cc: Dan Olson – Cheyenne



North American Manufacturing Company

4455 EAST 71ST STREET • CLEVELAND, OH 44105-5600 USA
PHONE (216) 271-6000 • FAX (216) 641-7852

PROPOSAL

Page 1

INQUIRY NUMBER DUCT BRN

SUBMITTED TO: S42720
SOLVAY MINERALS INC
P O BOX 1167
GREEN RIVER, WY 82935

QUOTE NUMBER Z92260-088251
QUOTE DATE 05/20/96
TERMS 1% 10 DAYS, NET 30.
F.O.B. CLEVELAND, OHIO
DELIVERY 10-12 WEEKS
SIC

ATTN: REID LAMPPA
COPIES: PH: 307-872-6508
FX: 307-872-6510

(PLEASE MAIL ORDER TO:)
NORTH AMERICAN MFG COMPANY
SUITE 260
18600 MAIN STREET
HUNTINGTON BEACH, CA 92648
(714) 847-1907
FAX: 7148424534

SUBJECT: DUCT BURNER

ITEM	QTY	PART NUMBER	DESCRIPTION	UNIT PRICE	EXTENSION

* SPECIFICATIONS *					

10			+APPLICATION: DUCT BURNER		
			SIZE: UNKNOWN		
			TEMP. RANGE: 400 DEG. F.		
			CYCLE: CONTINUOUS		
			FCE. WALL: CARBON STEEL		
			FUEL: NATURAL GAS		
			PROD. RATE: UNKNOWN		
20			+HEAT INPUT: 9.0 MM BTU/HR.		
			INS. STANDARDS: IRI APPROVABLE		
			COM.CHAM.PRESS: NEGATIVE		
			COM. AIR TEMP: 70 DEG. F.		
			ALTITUDE: 6000'		
			ELECTRICAL: 120/1/60 HZ CONTROL		
			480/3/60 HZ BLOWER		
30			+INSTALLED: INDOORS		





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PROPOSAL

Page 2

INQUIRY NUMBER DUCT BRN

SUBMITTED TO: S42720
SOLVAY MINERALS INC
P O BOX 1167
GREEN RIVER, WY 82935

QUOTE NUMBER Z92260-088251
QUOTE DATE 05/20/96

ITEM	QTY	PART NUMBER	DESCRIPTION	UNIT PRICE	EXTENSION

* BURNER *					

40	1	4988-9000-L	LOW PRESSURE BURNER COMPLETE		
			W/FOLLOWING:		
45		1)2000-P	T3.0-B36T2SF		
			SEVERVE DUTY MOTOR		
50	1	4-6012-1	MOUNTING FLANGE F/4988-9000		

* GAS TRAIN *					

60	1	8777-7-H	4" HT FLEXIBLE NIPPLE		
70	1	8522-XX	PACKAGED FUEL TRAIN - GAS		
			CONSISTING OF THE BELOW		
			ITEMS:		
75		1)8000-E	ENGINEERING & ASSEMBLY		
80		1)1008DA-6	3" ADJ PORT VALVE FOR 1275		
			FISHER 1052		
90		1)1000-P	FISHER 1052 SIZE 20		
			C/W IP & AUX SW		
100		1)1821-6	3" BALL VALVE		
110		2)1519-6	3" AUTOMATIC SHUTOFF VALVE		
			120/1/60		
120		1)1487A-4-W	2" SOL VENT VALVE NEMA 4		
130		1)8697-6-A7200	3" ORIFICE METERING SYSTEM		
140		1)7336-4-H1	2" HIGH PRESS REG 1-5 PSI		
150		1)8558-4-40	2" Y-TYPE STRAINER		
151		1)1821-4	2" BALL VALVE		
160		2)8000-A-P	ASCROFT		
			B420B-XFSFM30H20		
			(PSL-826,SP=5" WC)		
			(PSH-823,SP=15" WC)		
170		1)1486A-01-W	1/2" SOL GAS SHUTOFF VALVE		
180		1)7345A-01	1/2" REGULATOR		

SOLVAY2016_1.4_001017



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PROPOSAL

Page 3

INQUIRY NUMBER DUCT BRN

SUBMITTED TO: S42720
SOLVAY MINERALS INC
P O BOX 1167
GREEN RIVER, WY 82935

QUOTE NUMBER Z92260-088251
QUOTE DATE 05/20/96

ITEM	QTY	PART NUMBER	DESCRIPTION	UNIT PRICE	EXTENSION
190		1)1821-01	1/2" BALL VALVE		
200		3)8735-HM	0-32 OSI GAUGE		
210		5)1836-03	1/4" NEEDLE VALVE		
220		1)8000-A-P	ASCROFT D420B-XFSFM1 (PSL-522, SP=0.5" WC)		

* IGNITION SYSTEM *					

230	1	4065-6N4-6A	NEMA 4 TRANS 120 TO 6000V		

* CONTROL PANEL *					

240	1	8000-E	8865-U-1 BURNER MNGMT PANEL CONSISTING OF THE BELOW ITEMS:		
250)+		1) DC1001 HI TEMP LIMIT CONTROLLER.		
255)+		1) FLAME ROD.		
			1) NEMA 4 ENCLOSURE		
260	CN		CUSTOMER NOTE: ^{3?} MOTOR STARTER FOR 1 HP BLOWER MOTOR IS BY OTHERS. TC IS BY OTHERS.		
265	CN		CUSTOMER NOTE: TEMPERATURE CONTROLLERS ARE THRU CUSTOMERS DCS.		
270	1	LS	LUMP SUM TOTAL	33892.00	33892.00



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PROPOSAL

Page 4

INQUIRY NUMBER DUCT BRN

SUBMITTED TO: S42720
SOLVAY MINERALS INC
P O BOX 1167
GREEN RIVER, WY 82935

QUOTE NUMBER Z92260-088251
QUOTE DATE 05/20/96

<u>ITEM</u>	<u>QTY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
QUOTE TOTAL					33892.00

Prices firm for 30 days for orders placed for delivery anytime within 4 months from date of order based on quoted delivery time. For quoted delivery time see the front page of this quotation. If design, manufacturing or shipment is delayed more than 4 months at customers request, prices will be those in effect at the time of shipment.

SINCERELY,

JIM KONDZIELA

PAGE 1

STATUS AC

JPM METZINER

EXTENSION 541

EST/CONF	CHARGE TYPE
UNIT PRICE	CHARGE ID

DATE REQ

CHARGE ID

VENDOR NO / NAME / PHONE
SUGG VENDOR

02-SEP-96

PR
9646

LOT COSTS FOR A 9 MMBTU/HR NATURAL GAS BURNER, PER N.A.QUOTE #Z92260-088251 DATED 5/20/96. BURNER COMPLETE WITH FAN, FUEL TRAIN, AND INSTRUMENTATION AS PER SAME QUOTE.

NORTH AMERICAN

REQUISITION TOTAL 30502.80 US\$

SOLVAY2016_1.4_001020

AQD #73

BR-700

NORMAN PITT & ASSOCIATES
9041 WONDERLAND PARK AVE
LOS ANGELES CA 90046

P51972
213 656-2014

SOLVAY MINERALS INC
MARK: PO# P29077 & 5174
20 MILES W. OF GREEN RIVER
WESTVACO RD
GREEN RIVER WY 82935

S42721

Order	Date	Customer	P.O.	Want	Schd	Revd	Shippd	Total	Slsm
GG6580	073096	5174		091696	100296	101096	100996	23768.50	Z92260 *037
Acct: IO Tax: WY Prom: 101496 ShVia: BW InvCd:									
Flags: ENG'D, OVRD-MIN, LUMPSUM									

S42721

Line	Ord Qty	Rdy Qty	Shp Qty	Part number	Description	Chgdat	Ptyp
0001	1	1	1	LS	"FIRST PROGRESS BILLING" {15% OF ORDER TOTAL DUE UPON ENTRY}	081396	NONE
					RECEIVED CHECK #13048 DATED 8/8/96 FOR \$3,505.28		
0002	1	1	1	LS	"SECOND PROGRESS BILLING" {35% OF ORDER TOTAL DUE 8 SEPTEMBER 1996 /OR/ BEFORE ANY MATERIAL IS RELEASED FOR SHIPMENT}	081396	NONE
0003	1	1	1	LS	"FINAL BILLING"	100196	NONE
0005	0	0	0	P-NO	DJZ	073096	NONE
					#		
0010	0	0	0	+APPLICATION:	DUCT BURNER SIZE: TEMP. RANGE: CYCLE: FCE. WALL: FUEL: PROD. RATE:		
					UNKNOWN 315 DEG. F. CONTINUOUS CARBON STEEL NATURAL GAS 12,100#/HR AIR		
0020	0	0	0	+HEAT INPUT:	2.5 MM BTU/HR.		
				INS. STANDARDS:	IRI APPROVABLE		
				COM.CHAM.PRESS:	NEGATIVE		
				COM. AIR TEMP:	70 DEG. F.		
				ALTITUDE:	6000'		
				ELECTRICAL:	120/1/60 HZ CONTROL 480/3/60 HZ BLOWER		
0030	0	0	0	+INSTALLED:	INDOORS		
0040	1	1	1	4988-2500-L	LOW PRESSURE BURNER COMPLETE		ASY
					W/FOLLOWING: (BRN-400)		
0045	1			4000-P	PURCHASED ITEM PER SPEC		OPJ
					SEVERVE DUTY MOTOR		
					LEESON WASHDOWN 113023		
0050	1	1	1	4-5506-2	MOUNTING FLANGE F/4988-2500		STK
					(MTG-400)		
0060	1	1	1	8777-4-H	2" HT FLEXIBLE NIPPLE		STK
					(FCPL-801)		
0070	1	1	1	8522-3-XX	PACKAGE FUEL TRAIN- GAS	100196	ENG
					CONSISTING OF THE BELOW ITEMS:		
					PRODUCT-LEAD-MIKOLS-9-9-96 APPROVALS ARE NOT REQ. APPLICATION: DUCT BURNER. 2.5 MMBTU NEMA 4. FUEL: NAT. GAS @ 2500 CFH. FUEL PRESSURE IN @ 50 PSI, BUILT TO NAMCO SPECS, + NAMCO STANDARD PAINT.	080196	
0071	0						

SOLVAY2016_1.4_001021

QTY	UNIT	DESCRIPTION	QTY	UNIT	DESCRIPTION	QTY	UNIT	DESCRIPTION
0075	1	MC			MOUNTING CHARGE	100196	NONE	
0080	1	1008DA-3-#2			FOR INSTALLATION OF ITEM 225	090696	ENG	
30	1	1000-P			FOR FISHER 1052 (FV-810)	090496	OPJ	
					TYPE 1052 SIZE 20 DIAPHRAGM			
					FISHER DIAPHRAGM ACTUATOR			
					0-33 PSI OPERATION,			
					1) 3620J 4-20MA POSITIONER			
					2) 67 AFR SUPPLY REGULATOR			
					3) 304-110 POS SW (UP-DOWN)			
					4) TOP MTD HANDWHEEL			
0095	0				ENGINEERING-INDEX: DPA-000391			
					+ 7/8" SHAFT, FLATS PERPENDIC-			
					ULAR TO SPRING BARREL,			
					SPRING RETURN TO ROTATE			
					SHAFT CCW TO CLOSE VALVE			
0100	1	1821-3			1-1/2" BALL VALVE		STK1	
					(HV-822)			
0110	2	1519-3			1-1/2" AUTO SHUTOFF VALVE		STK	
					120/1/60			
					(BEV-824)			
0115	1	4074VT			LEAK TEST PUSHBUTTON STATION	073096	ASY	
					(MT'D IN J-BOX)			
0120	1	1487A-1-W			1" SOL VENT VALVE NEMA 4		STK	
					(BEV-825)			
0130	1	8697-3-A2000			1-1/2" ORIFICE METER SYSTEM		ASY	
					(FE-817)			
0140	1	7337-3-LB			1-1/2" REGULATOR		STK1	
					(PRV-829)			
0150	1	8558-3-40			1-1/2" Y-TYPE STRAINER		STK1	
					(STR-835)			
51	1	1821-3			1-1/2" BALL VALVE		STK1	
					(HV-836)			
0160	1	8000-A-P			DWYER 1950P-8		OPJ	
					(PSH-823, SP=4 PSIG)			
0165	1	8000-A-P			DWYER 1950P-2		OPJ	
					(PSL-826, SP=1 PSIG)			
0170	1	1486A-01-W			1/2" SOL GAS SHUTOFF VALVE		STK	
					(BEV-1424)			
0180	1	7345A-01			1/2" REGULATOR		STK	
					(PRV-1429)			
0190	1	1821-01			1/2" BALL VALVE		STK1	
					(HV-1436)			
0200	3	8735-HM			0-32 OSI GAUGE		STK1	
					(PI-1438) (PI-838)			
0205	1	8735-P			0-100 PSI GAUGE		STK1	
					(PI-839)			
0210	6	1836-03			1/4" NEEDLE VALVE		STK	
					(HV-1441) (HV-841)			
0220	1	8000-A-P			DWYER		OPJ	
					1950-0			
					(PSL-522, SP=0.5" WC)			
0225	1	8000-A-P			DWYER 1950-00	100196	OPJ	
					PSH1725, SP=015"WC			
0228	1	26-5311-1			J-BOX PER JA23-6649	073096	ELEC	
					NEMA 4			
0230	1	1	1	4065-6N4-6A	NEMA 4 TRANS 120 TO 6000V		ELEC	
					(IGN-1505)			
40								

				BELOW ITEMS:	
				(CP-1600)	
0250	0		+	1) DC1001 HI TEMP LIMIT	073096
				CONTROLLER.	
0255	0		+		073096
0260	0	0	0	1) NEMA 4 ENCLOSURE	
				PAPER TAG-ONE PER LINE ITEM	090996 NONE